

SERVICE
MANUAL

TT 333

marantz®

Model TT 333

Turntable

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, MARANTZ part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

MARANTZ S.A.
EUROPEAN PARTS DEPARTMENT
2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
Phone: 1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING:

Parts may be ordered from the following addresses:

EUROPE

MARANTZ S.A. European Parts Department 2, Avenue Léopold III B-7120 Péronnes-lez-Binche Belgium Telex: 57589	MARANTZ GERMANY GMBH Max Planckstrasse, 22 6072 DREIEICH 1 West Germany Telex: 4185316	MARANTZ FRANCE 4 Rue Bernard Palissy 92600 Asnières France Telex: 611651	MARANTZ DENMARK Bregnerødevej 132b 3460 Birkerød Denmark Telex: 39137	MARANTZ GMBH AUSTRIA Wiedner Hauptstrasse 98 1050 Wien Austria Telex: 113583
MARANTZ S.A. 326 Avenue Louise Bte 32 1050 Brussels Belgium Telex: 26602	MARANTZ NORSKE A.S. Refstadalleen 13 Oslo 5 Norway Telex: 19659	MARANTZ AUDIO U.K. LTD. Unit 15/16 Saxon Way Industrial Estate Moor Lane Harmondsworth UB7 0LW Great Britain Telex: 935196	MARANTZ BELGIUM 45 Rue Auguste Van Zande 1080 Brussels Belgium	MARANTZ SVENSKA A.B. Svartviksvangen 56 Traneberg - Box 12016 16112 Brömmma Sweden Telex: 13449

AUSTRALIA

MARANTZ AUSTRALIA PTY., LTD.
32 Cross Street
Brookvale, N.S.W. 2100
Australia
Telex: 24121

U.S.A.

MARANTZ COMPANY, INC.
National Service Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.
Telex: 4720284

CANADA

SUPERSCOPE CANADA, LTD.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

JAPAN

MARANTZ JAPAN, INC.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan
Telex: 22878

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

NOTE—FOR U.S.A. ONLY

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from SUPERSCOPE NATIONAL PARTS DEPARTMENT.

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FEATURES

Front loading, drawer type, full automatic, direct drive, linear tracking with reject, repeat, cueing, backward search and forward search (2-steps speed), speed selector and sensor change selector.

SPECIFICATIONS:

Type	2 speeds, direct drive, linear tracking, fully automatic turntable
Platter	Aluminum alloy die-cast, 295mm diameter
Motor	DC coreless direct drive
Speed	2 speeds; 33-1/3 and 45 rpm
S/N (DIN B)	60dB or more, Test record: DIN45544, Test equipment: by DIN45500
Wow & Flutter (DIN B)	0.2% or less, Test record: DIN45545, Test equipment: by DIN45507
Tonearm	
Effective length	95±1mm
Cartridge	
Frequency response	20 – 20,000Hz
Output voltage	3 – 10mV at 1kHz, 5.6 cm/sec, Test record: DIN45543
Channel difference	2dB or less at 1kHz, Test record: DIN45543
Channel separation	20dB or more at 1kHz, Test record: DIN45543
Tracking force	1.5 gram±0.3 gram
Stylus tip	0.6 mil diamond stylus
Power source	100/120/220/240V 50/60Hz, 220V 50Hz for Europe, 240V 50Hz for UK and Australia
Power consumption	12W±25%
Dimensions	320(W) x 335(D) x 100(H) mm
Weight	7 kg
Accessories	45 rpm adaptor, 2 pcs of 1-P RCA cords (green and black), masking sheet

NOTE: Nominal Specs represent the design specs; all units should be able to approximate these-some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any Limit Spec.

Lubrication of the mechanism is not required. However, whenever a unit is brought in for adjustment or repair, always use good common sense . . . clean any dust or dirt from mechanical parts and if moving parts do seem to bind, check for dirt. If necessary, add a very fine film of light-weight specially formulated lubricant.

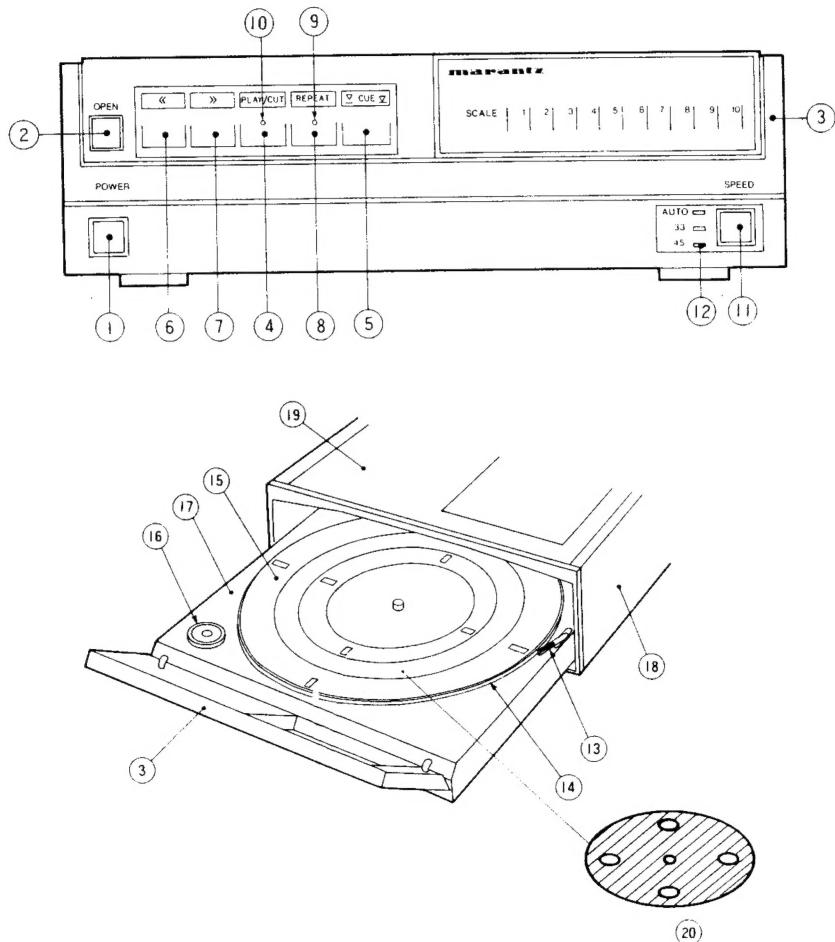
1. SHOCK, FIRE HAZARD SERVICE TEST

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.

Ref. UL Standard No. 1270. Para. 66.3. D (Mandatory Test after servicing Electrical Appliances, effective 7-1-83).

2. DESIGNATION



- | | |
|----|---------------------|
| 1 | Power Switch Button |
| 2 | Open Button |
| 3 | Front Door |
| 4 | Play/Cut Button |
| 5 | Cue Button |
| 6 | (<<) Button |
| 7 | (>>) Button |
| 8 | Repeat Button |
| 9 | Repeat Indicator |
| 10 | Play Indicator |
| 11 | Speed Change Button |
| 12 | Speed Indicator |
| 13 | Stylus Cleaner |
| 14 | Turntable Platter |
| 15 | Rubber Mat |
| 16 | EP Adaptor |
| 17 | Cabinet |
| 18 | Case |
| 19 | Dust Cover |
| 20 | Masking Sheet |

3. DISASSEMBLING INSTRUCTION

1). Disassembling Housings (See fig. 1)

- (1) Active turntable by power switch on.
- (2) Draw-out main cabinet fully by pressing open button.
- (3) Switch off the power by pressing power button.
- (4) Close front door by hand.
- (5) Remove top lid.
- (6) Mount stylus cover and then dismount rubber mat and turntable platter.
- (7) Remove 2 pcs. of screws (A) from C-shaped angle (2).
- (8) Dismount front frame.
- (9) Remove 4 pcs. of screws (B).
- (10) Place turntable unit upside down on the table which surface is soft enough to protect the unit from any damage, and then remove 6 pcs. of screws (C) to dismount side cover.

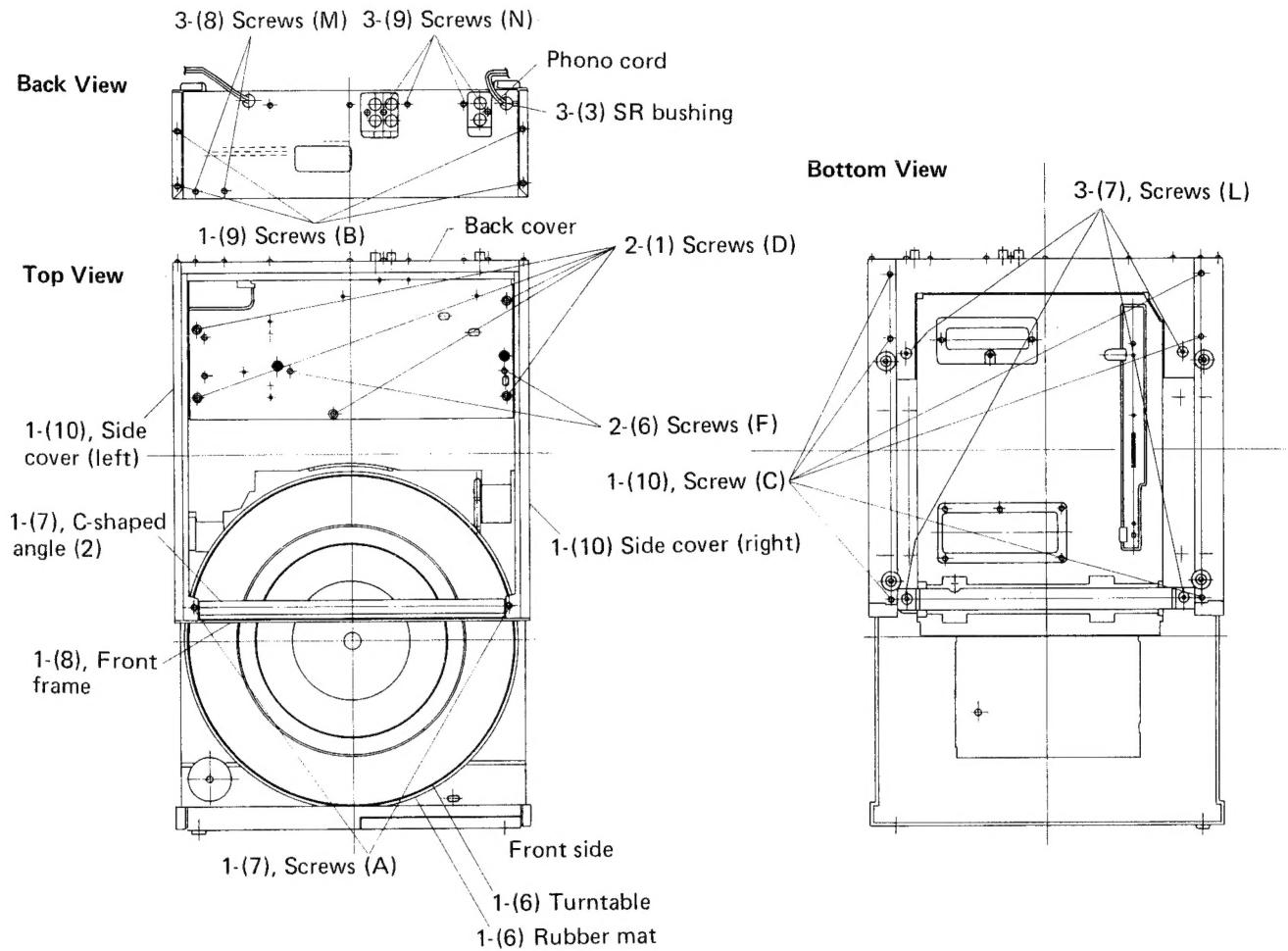


Fig. 1

2). Disassembling tonearm mechanism

- (1) Move tonearm base to the center of guide bar and then remove 5 pcs. of screws (D) from tonearm chassis. (See fig. 1, 2)
- (2) Pulling front edge of the tonearm chassis upward by hand, remove 4 pcs. of screws (E) from top of mechanism cover. (See fig. 3)
- (3) Unsolder soldering point (A) connected to lead wires from tonearm mechanism ass'y and muting circuit ass'y, and then disconnect connector (A) from control PWB ass'y (2). (See fig. 15)
- (4) Dismount tonearm mechanism ass'y. (See fig. 4)
- (5) Dismount tonearm drive motor. (See fig. 4, 5)
 - 1. Take off fastner for lead wires.
 - 2. Peel off fixing tape for lead wires.
 - 3. Remove drive belt for motor.
 - 4. Pull out drive motor.
 - 5. Remove 2 pcs. of rubber caps.
 - 6. Remove pulley.
- (6) Dismount tonearm ass'y. (See fig. 2, 4, 5, 6)
 - 1. Take off hook of rope spring for tonearm ass'y. (See fig. 4)
 - 2. Locate tonearm base at the center of guide bar by hand.
 - 3. Remove 2 pcs. of screws (F) from bottom side of tonearm chassis. (See fig. 1, 2)
 - 4. Holding tonearm base by hand and pull it forward so that tonearm ass'y is remove from the chassis.
 - 5. Pull out guide bar holder. (See fig. 6)
 - 6. Pull out guide bar from tonearm base. (See fig. 6)
- (7) Dismount slit plate ass'y. (See fig. 6)
 - 1. Remove tension coil spring which is mounted between slit plate and tonearm base.
 - 2. Shift slit plate to the left end of the slit, and then pull upward.

- (8) Dismount position sensor PWB ass'y. (See fig. 7)
 - 1. Place tonearm chassis upside down.
 - 2. Remove 2 pcs. of screws (G) from guide plate. (See fig. 7)
 - 3. Remove 2 pcs. of screws (H) from position sensor ass'y. (See fig. 7)
 - 4. Peel off insulation tape.
 - 5. Remove one piece of each screw (I) from an upper PWB and a lower PWB. (See fig. 7)
- (9) Dismount LED PWB for record disc existence sensor.
 - 1. Remove 2 pcs. of screws (T) (See fig. 3)
- (10) Dismount mechanism cover. (See fig. 2)
 - 1. Remove 2 pcs. of pivot screws (J) from left and right.

3). Disassembling back cover

- (1) Unsolder 4 pcs. of terminals (B) and remove 2 pcs. of screws (K) from terminal cover. (See fig. 15)
- (2) Unsolder a grounding wire of back cover (C) from muting circuit ass'y. (See fig. 15)
- (3) Remove phono cord and SR bushing from back cover. (See fig. 1)
- (4) Disconnect connector (B) connected between back cover PWB and Control PWB (2). (See fig. 15)
- (5) Push down brush into cabinet.
- (6) Place turntable unit onto the table upside down.
- (7) Remove 2 pcs. of screws (L) from back cover so that the cover is disassembled. (See fig. 1, 15)
- (8) Dismount power transformer. (See fig. 9)
 - 1. After disassembling back cover, remove 2 pcs. of screws (M) from back cover.
 - 2. Disconnect connector (D) for secondary so that power transformer is dismantled. (For 4 voltage versions, unsolder change over switch before disconnect (D).)

Note: In case of replacement of power transformer only, take step (1) and (8) so that power transformer is dismounted directly.

- (9) Remove 4 pcs. of screws (N) from back cover so that power supply PWB (2) is dismantled. (See fig. 1, 9)
- (10) Remove 2 pcs. of nuts (A) so that power supply PWB (1) is dismantled. (See fig. 9)

Note: In case of 4 voltage version, change-over switch can be dismantled by removing 2 pcs. of screws (D).

4). Disassembly of bottom plate (See fig. 11)

- (1) Dismount of stopper plate. (See fig. 8, 10)
 - Follow to step 3-(6), remove 4 pcs. of screws (P) from bottom of cabinet so that stopper plate of left and right can be removed, and then roller (A) can be removed.
- (2) Dismount of power switch. (See fig. 10, 11)
 - 1. Remove 2 pcs. of screws (Q) from bottom plate and clear the crest (A) provided with switch holder.
 - 2. Remove bottom plate ass'y by means of lifting by hand.
 - 3. Remove 3 pcs. of screws (R) from rack (A) so that mechanism portion of power switch is removed. (See fig. 8, 11)
 - (Carefully remove the mechanism, otherwise switch ball may be remained at bottom plate side.)
 - 4. Releasing latch (B) which holds micro switch, and then push the switch by a small stick or screw driver through square hole so that micro switch and lever can be removed. (See fig. 11)
- (3) Dismount muting circuit ass'y. (See fig. 11)
 - Remove a nut (B) from PWB and then unsolder (D) so that muting circuit ass'y can be dismantled.
- (4) Dismount control circuit ass'y (2). (See fig. 11)
 - Remove 2 pcs. of nuts (C) from PWB so that control circuit (2) can be dismantled.

5). Disassembly of cabinet

- (1) Dismount protection cover. (See fig. 16)
 - 1. Follow to step 4-(1), remove a screw (S) from the center of protection cover.
 - 2. Deflect the cover so that the cover is released from crest of cabinet.
- (2) Dismount control circuit ass'y (1). (See fig. 12, 13)
 - 1. Remove 4 pcs. of screws (T) from the control circuit (1). (See fig. 12)
 - 2. Dismount 12 pcs. of connectors (E) from back side of the PWB ass'y so that the circuit PWB ass'y (1) can be dismantled. (See fig. 13)

- (3) Dismount main motor. (See fig. 12, 13)
Remove 3 pcs. of screws (U) and 4 pcs. of screws (V) from the PWB ass'y so that the motor can be dismounted. (See fig. 12)
- (4) Dismount mechanism of drawer. (See fig. 12, 13)
Remove 2 pcs. of screws (W) so that the mechanism can be dismounted.
- (5) Dismount sub-motor. (See fig. 13)
 - 1. Remove 3 pcs. of screws (X).
 - 2. Remove a set screw (Y) from worm so that the motor can be dismounted.
- (6) Dismount switch PWB (2) ass'y. (See fig. 13)
Remove 2 pcs. of screws (Z) from the PWB.
- (7) PTR PWB ass'y. (See fig. 13)
Remove screws (b) from the PWB.
- (8) Front door ass'y. (See fig. 14)
 - 1. Place the cabinet upside down.
 - 2. Release 3 pcs. of screws (c) fitted to hinge portion of the door ass'y.
- (9) Cover (See fig. 17)
Remove a screw (d) from inside of the door, and then release the latch so that the cover can be dismounted.
- (10) Function control PWB (1) ass'y (See fig. 14)
Remove 4 pcs. of screws (e) from the PWB ass'y.
- (11) Hinge retainer (1) and hinge plate ass'y (2) (See fig. 12)
 - 1. Place the cabinet upside down.
 - 2. Remove a screw (f) from hinge retainer.
- (12) Switch-spring (2) and function control PWB (2) ass'y (See fig. 13)
 - 1. Remove a screw (g) from switch spring.
 - 2. Remove a screw (h) from the PWB.
- (13) Leaf switch ass'y (See fig. 13)
 - 1. Remove 2 pcs. of screw (i) from the hinge angle ass'y.
 - 2. Remove a screw (J) from the switch.

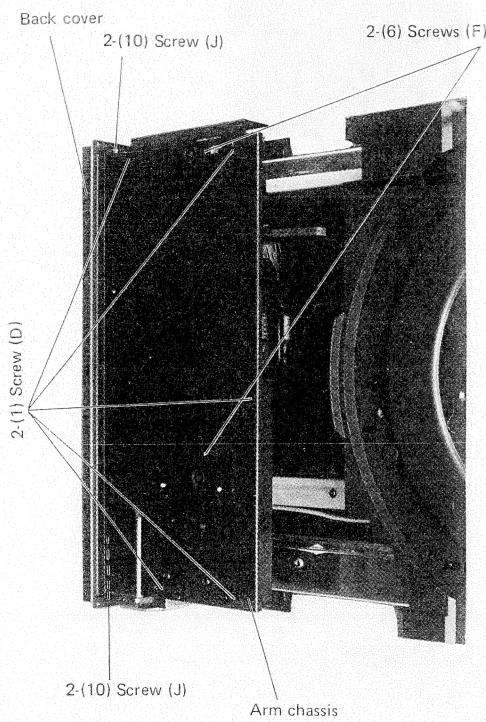


Fig. 2

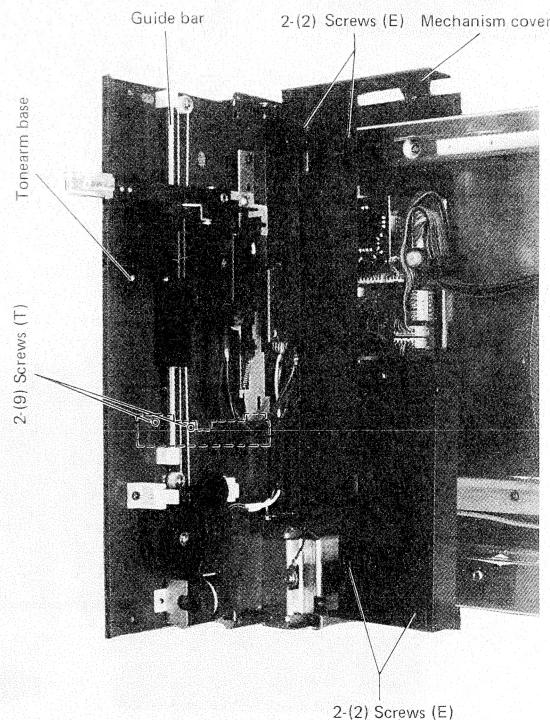


Fig. 3

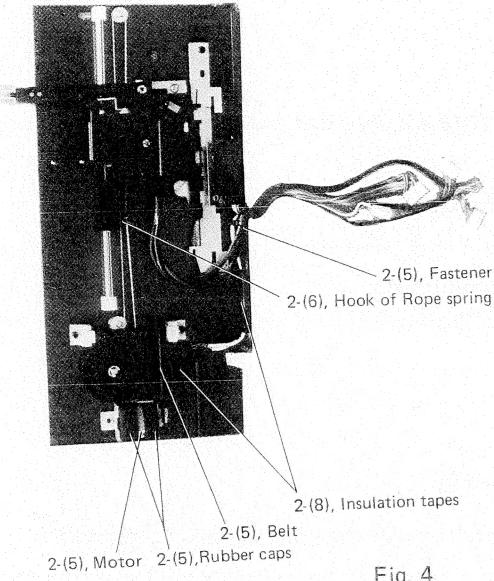


Fig. 4

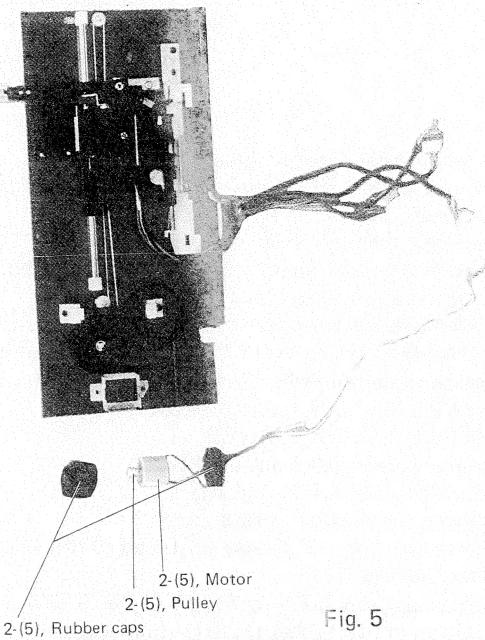


Fig. 5

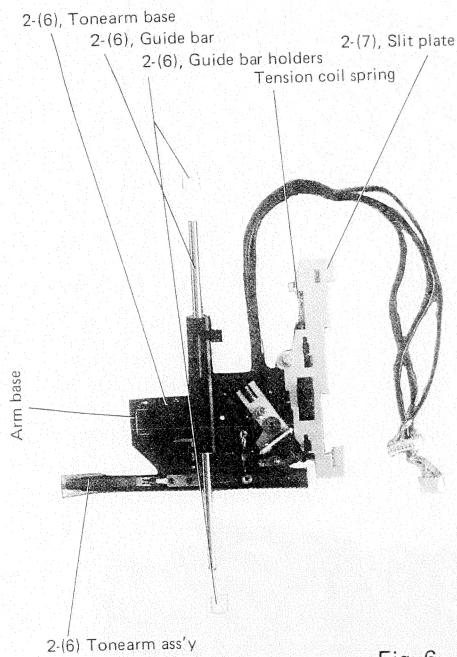


Fig. 6

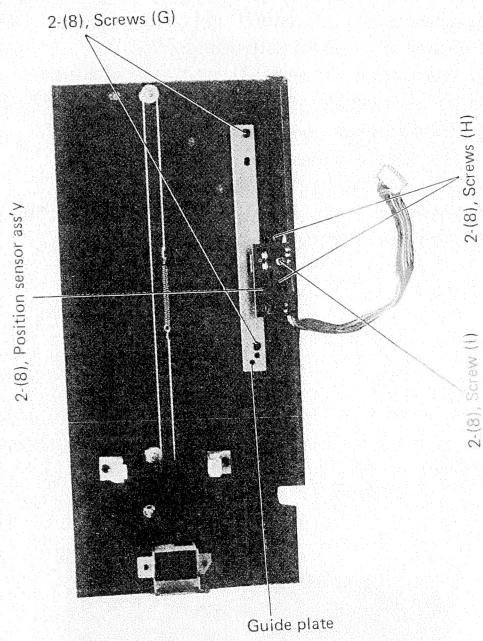


Fig. 7

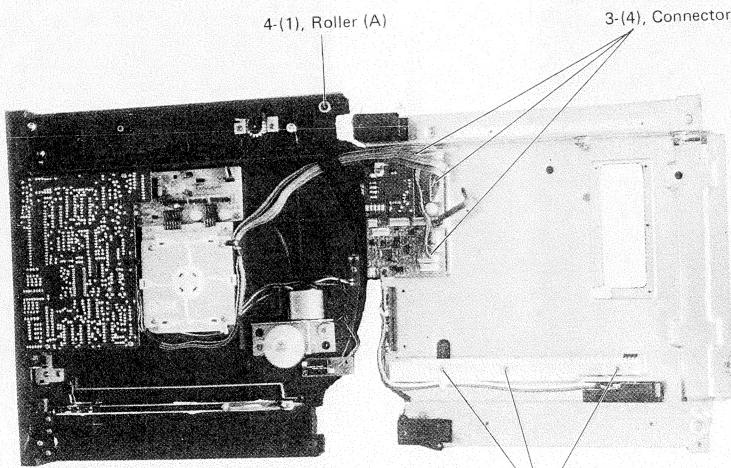


Fig. 8

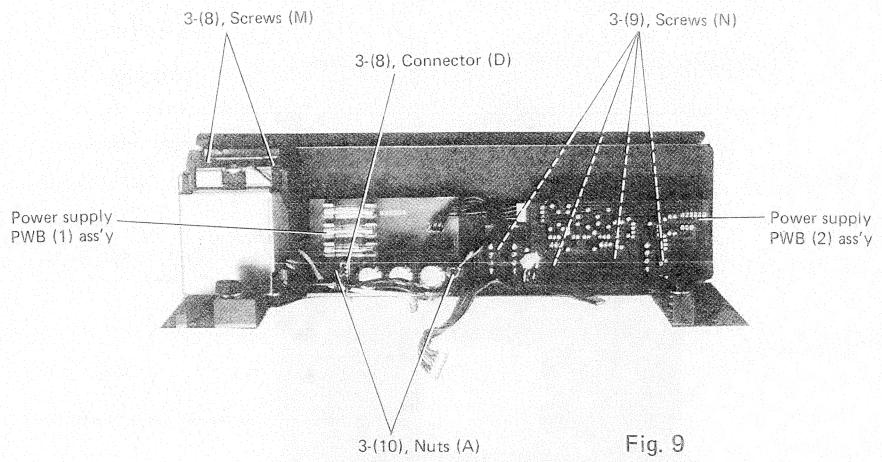


Fig. 9

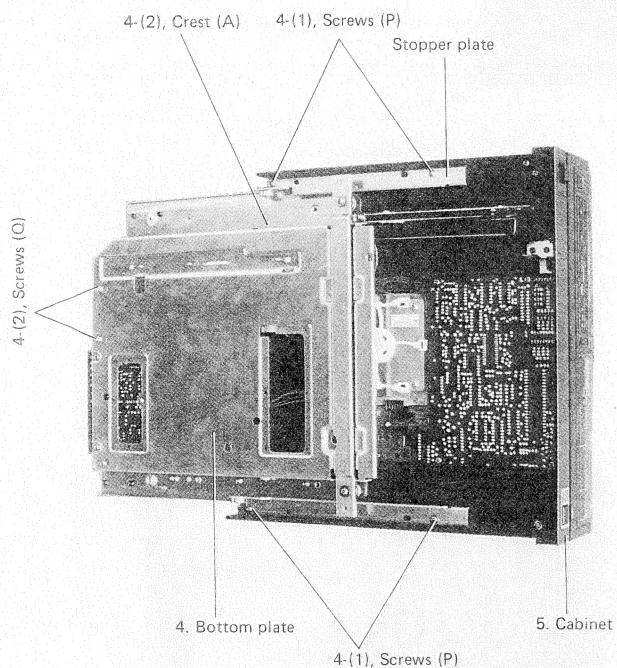


Fig. 10

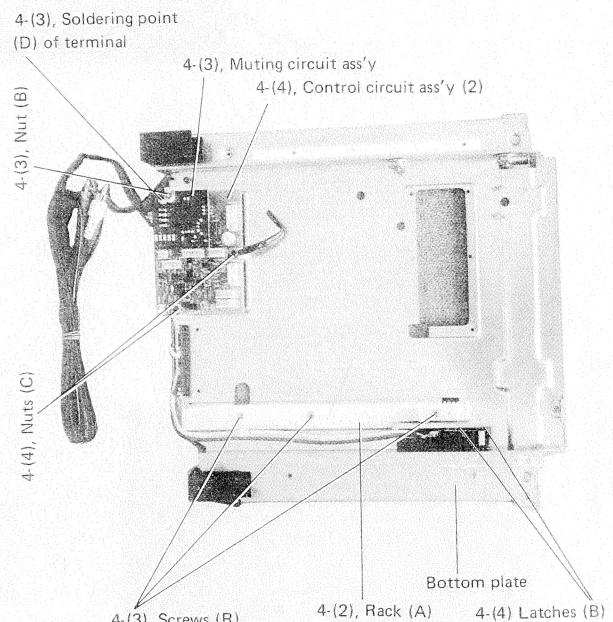


Fig. 11

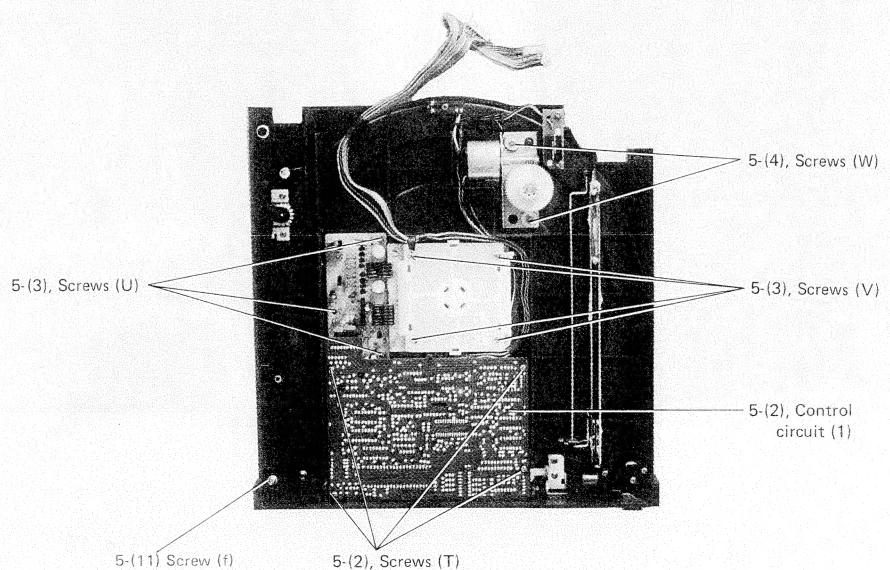


Fig. 12

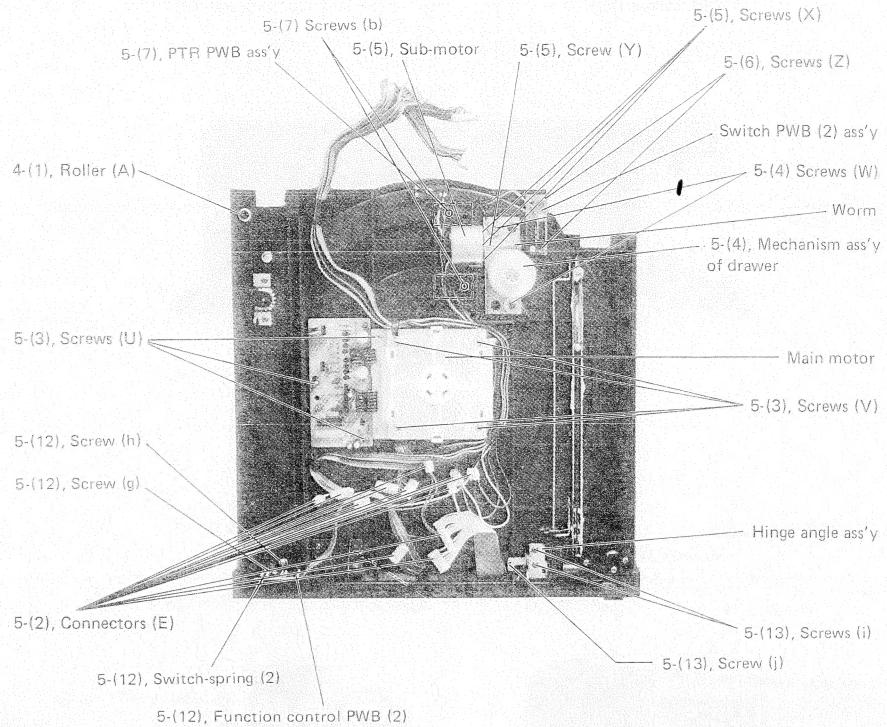


Fig. 13

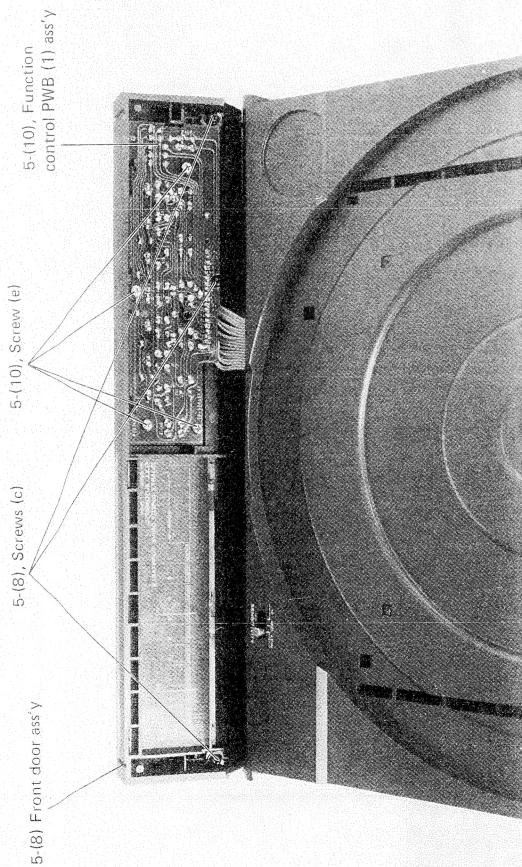


Fig. 14

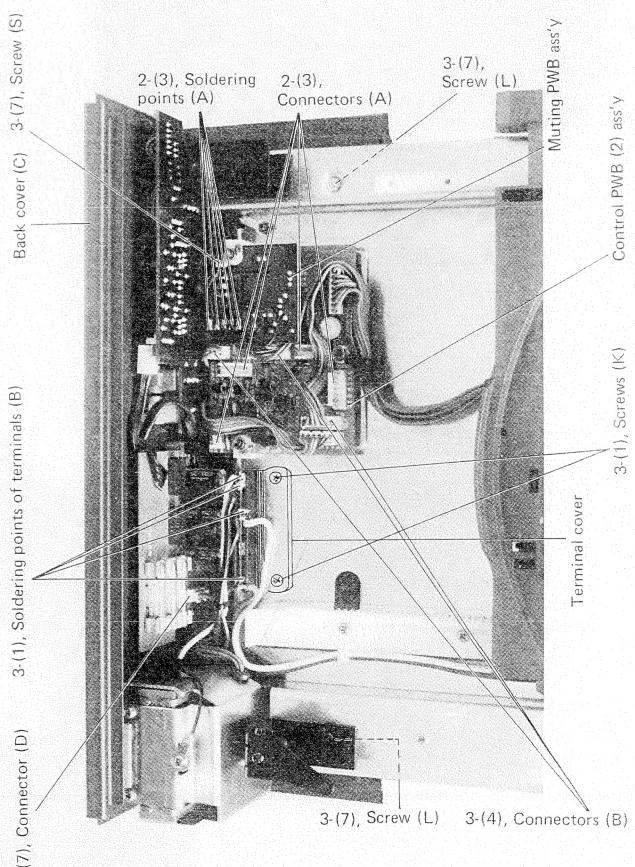


Fig. 15

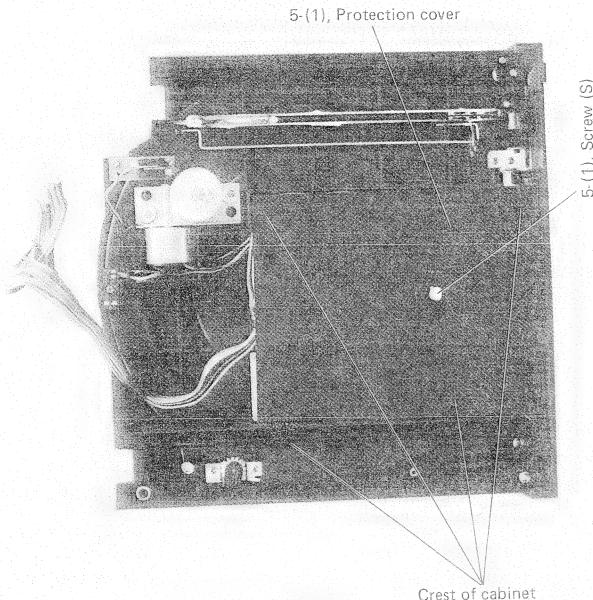


Fig. 16

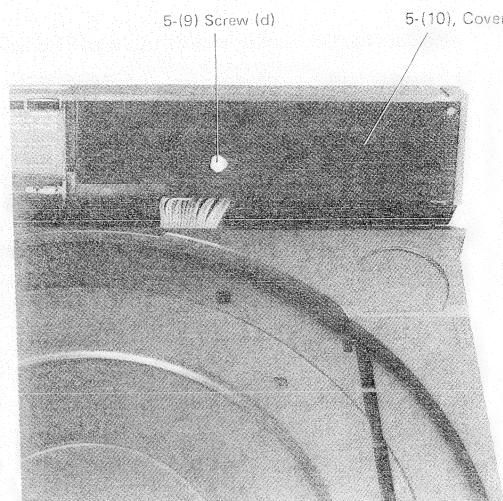


Fig. 17

4. ADJUSTMENT

1). Adjustment of Tracking Sensor

- (1) Set digital volt meter to DC, 20V range, and connect its $(+)$ terminal to J205 and $(-)$ terminal to J206. (See Fig. 18)
- (2) Adjust VR 201 so that voltage reads 9.0 to 9.5V when tonearm is swung to left side by hand (See Fig. 19), and then adjust eccentric pin (B) so that voltage reads -0.5 to $+0.5$ V when tonearm locates at the center (See Fig. 19, 20).

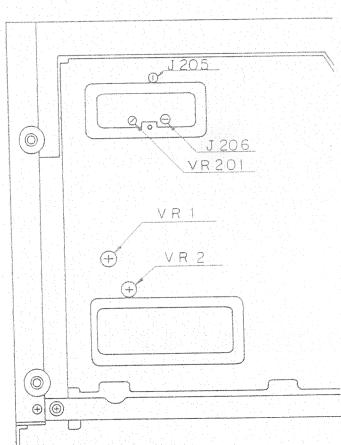


Fig. 18

Viewed from bottom

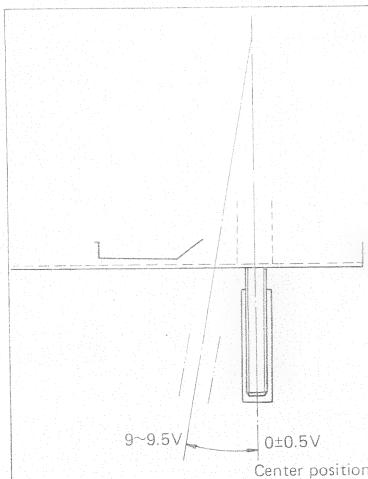


Fig. 19

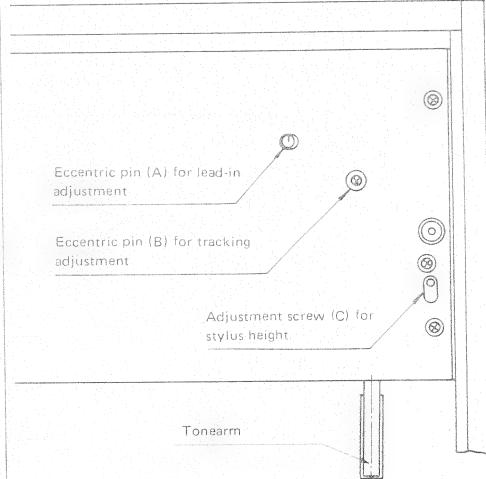


Fig. 20 Viewed from top

2). Adjustment of Stylus Height

- (1) Set turntable ready to play with a record disc and tonearm at rest position, and then switch off the power.
- (2) Adjust height of stylus within 4-6mm (normal 5mm) from surface of disc by turning adjustment screw (C) (See Fig. 20)

Note:

- (1) The adjustment of the screw is to be made with the tonearm at rest position.
- (2) The height becomes lower when adjustment screw (C) is turned clockwise direction.

3). Adjustment of Lead-in and Lead-off Position

- (1) Use special test record disc of NEC-1008 which having diameter of 17 cm (EP).
- (2) Adjust eccentric pin (A) (Fig. 20) so that lead-in count becomes 11 to 30 counts. (172 ~ 168.25 mm radius from the center)
- (3) 30 cm (LP) lead-in position is fixed by the adjustment for 17 cm (EP) automatically.

Note:

- (1) The adjustment of the pin is to be made with tonearm at the rest position.
- (2) Lead-in position moves gradually inward by rotating the eccentric pin (A) in a clockwise direction.

4). Adjustment of Turntable Speed (See Fig. 18)

- (1) Put a record disc on the turntable platter and then put strobe sheet on a record disc. Move the tonearm by (<<) button up to the position where the turntable platter starts rotation.
- (2) Adjust speed by VR1 for 45 rpm, or by VR2 for 33-1/3 rpm to see strobe patterns come to a standstill. (See Fig. 18 and 21)

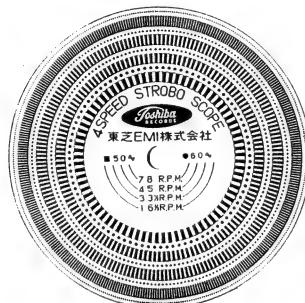
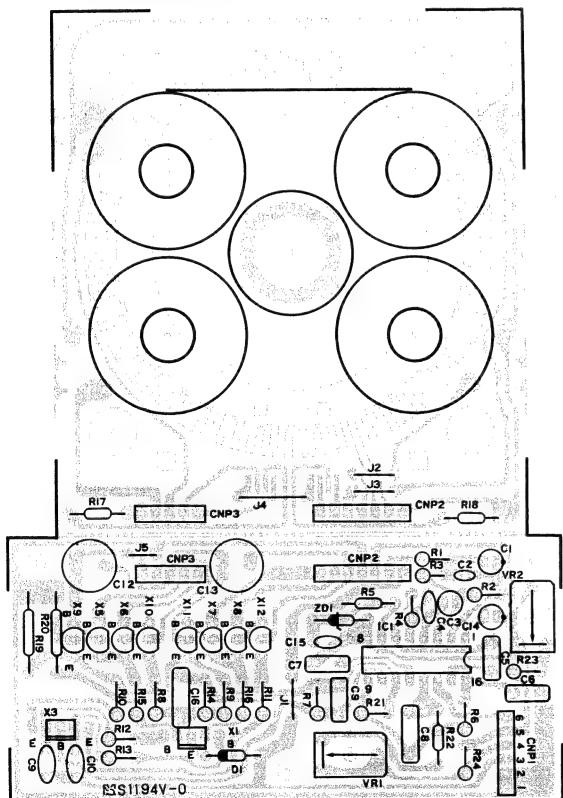
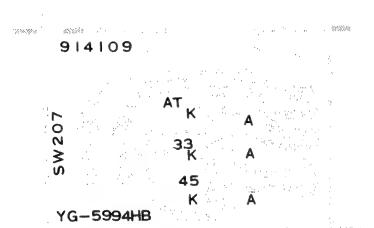


Fig. 21

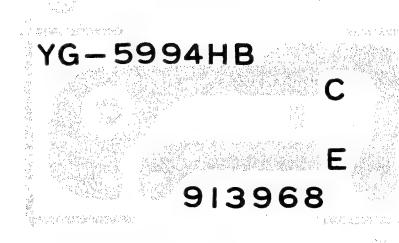
5. P.W. BOARDS



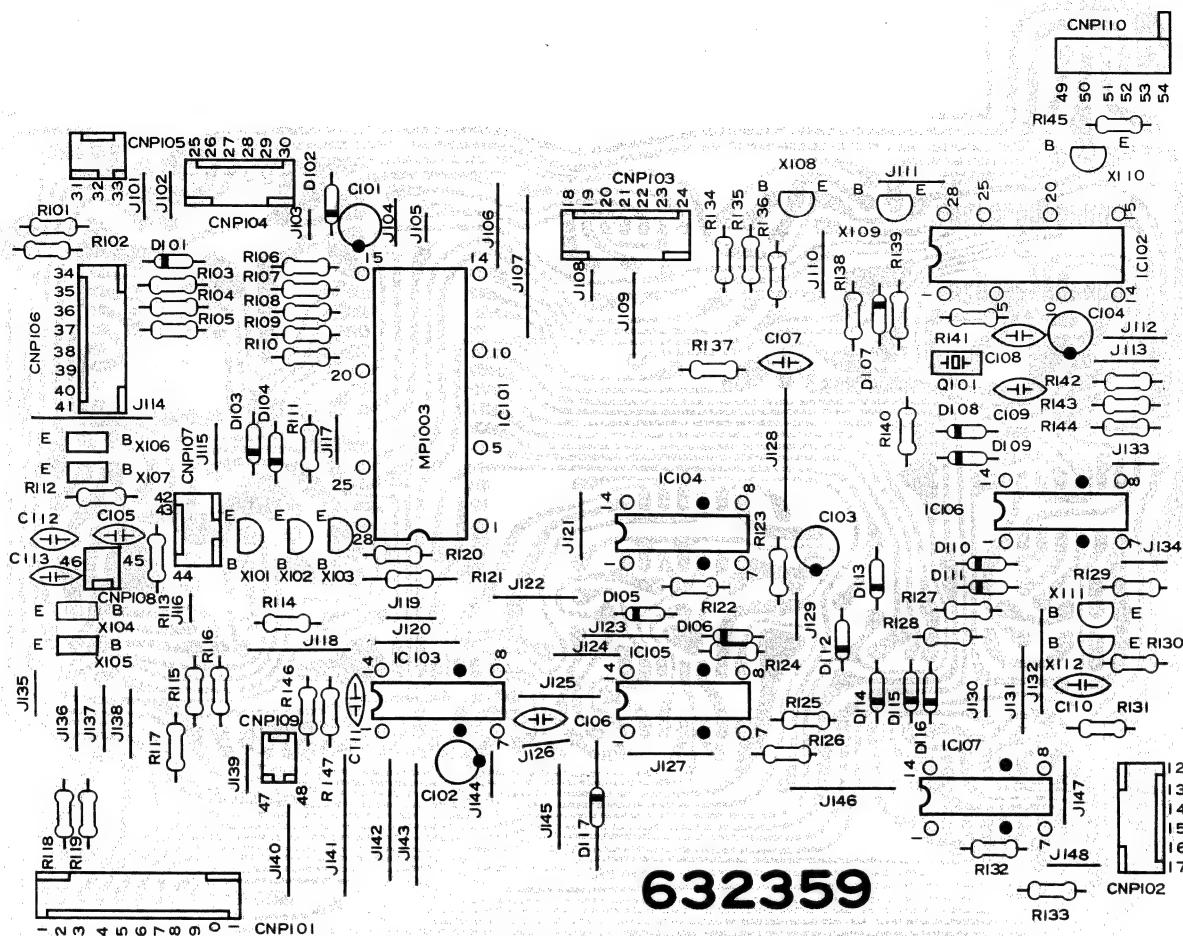
MOTOR CONTROL P.W.B.



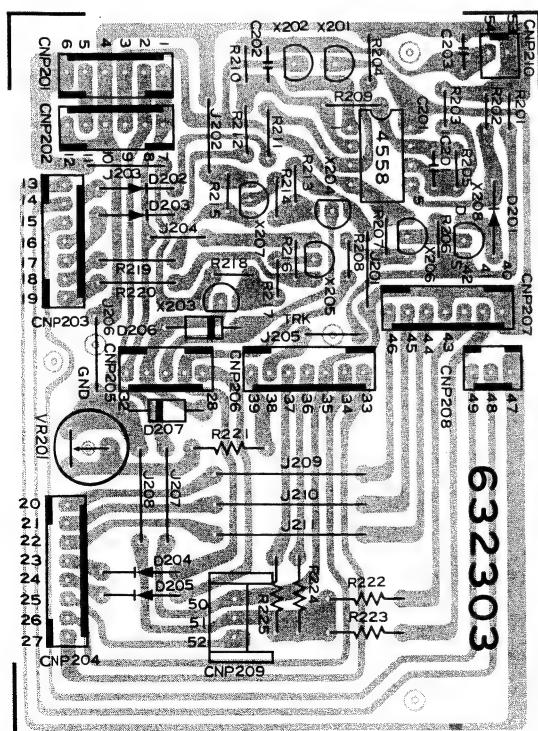
SPEED INDICATOR P.W.B.



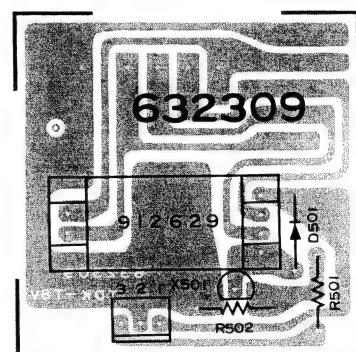
RECORD EXISTENCE
DETECTION P.W.B.



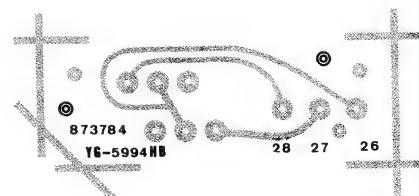
MAIN CONTROL P.W.B. (1)



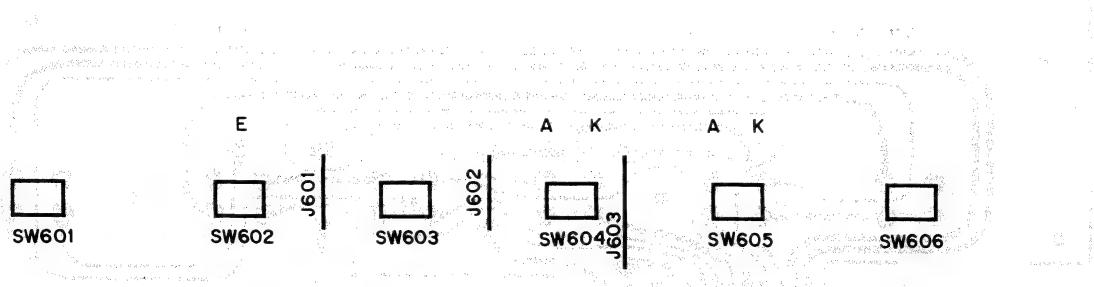
MAIN CONTROL P.W.B. (2)



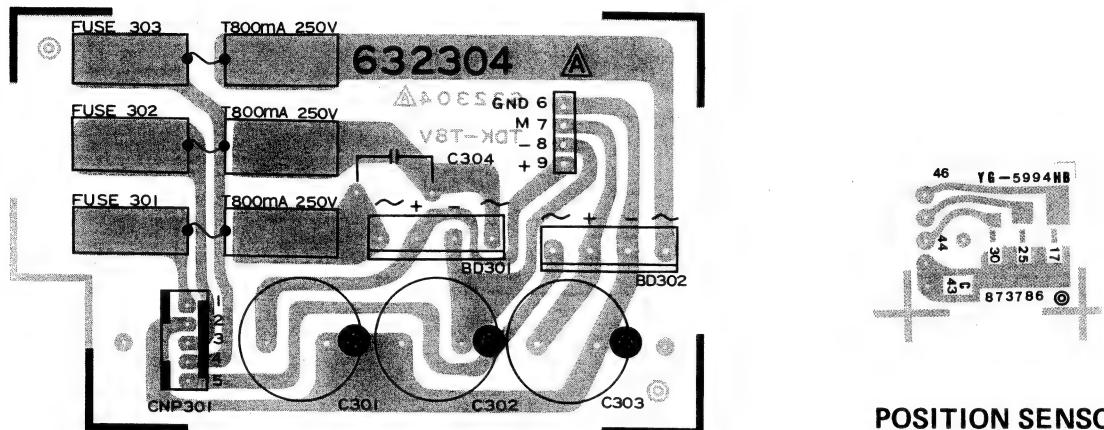
MUTING P.W.B.



DRAWER SWITCH P.W.B.

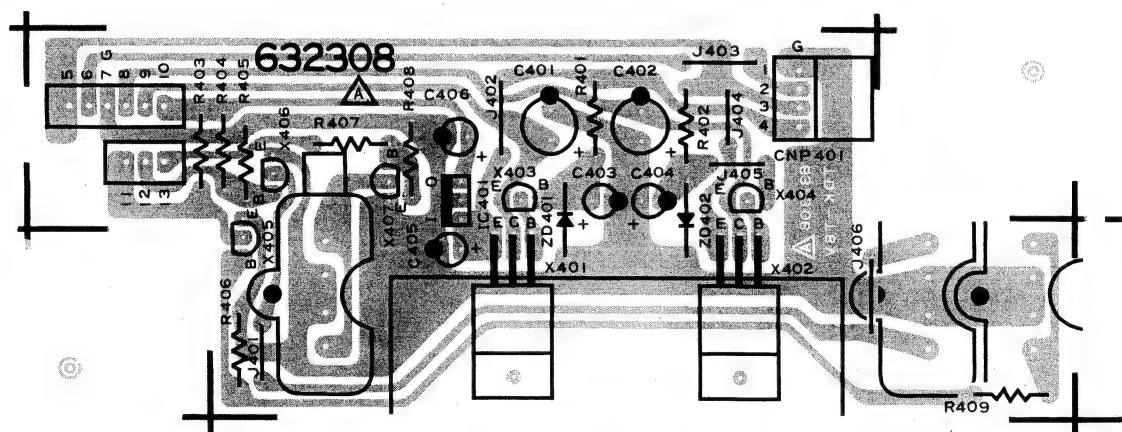


TOUCH CONTROL P.W.B.

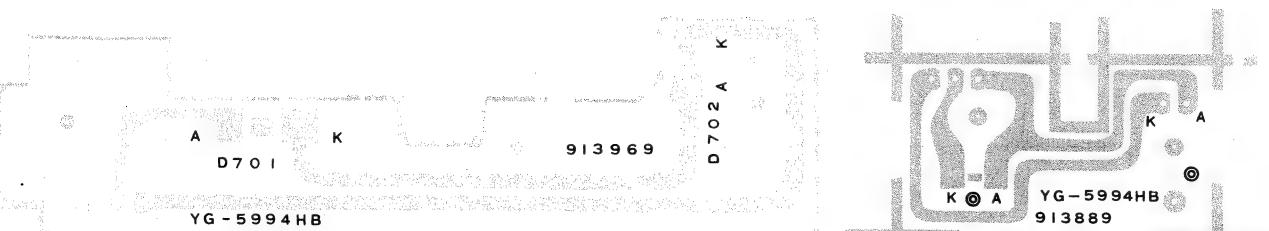


POWER SUPPLY P.W.B. (1)

**POSITION SENSOR
P.W.B.**

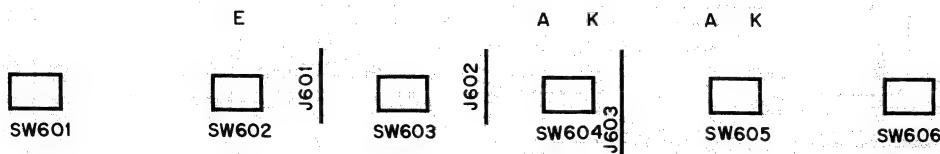


POWER SUPPLY P.W.B. (2)

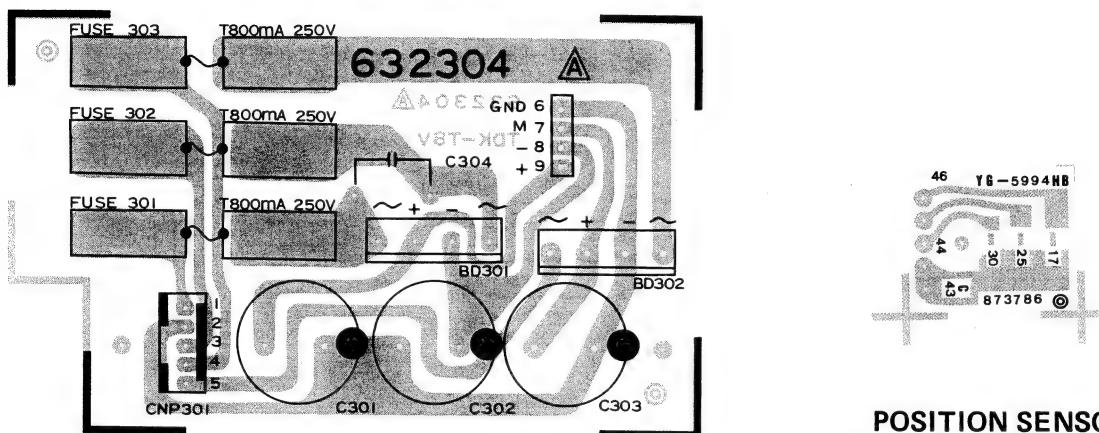


**RECORD SIZE POSITION
SENSOR P.W.B.**

**LED P.W.B. FOR LP SENSOR
AND POSITION SENSOR**

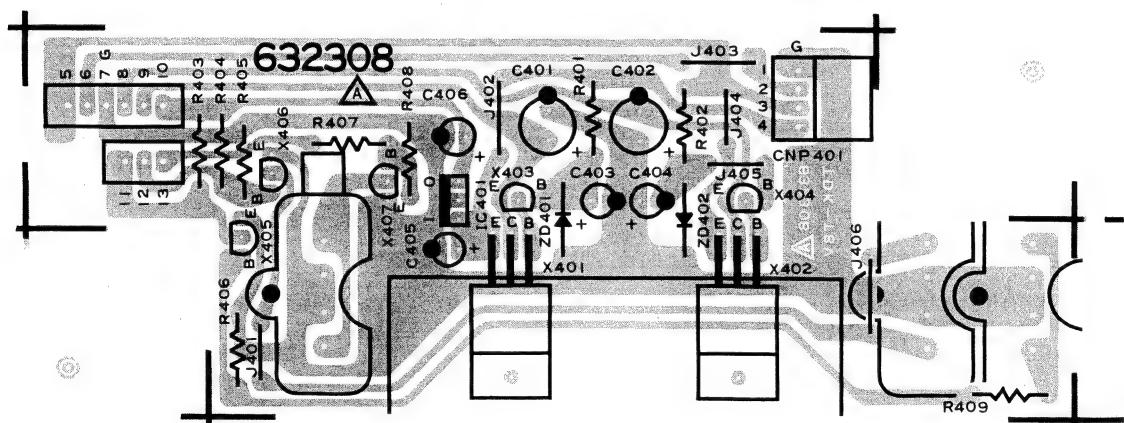


TOUCH CONTROL P.W.B.

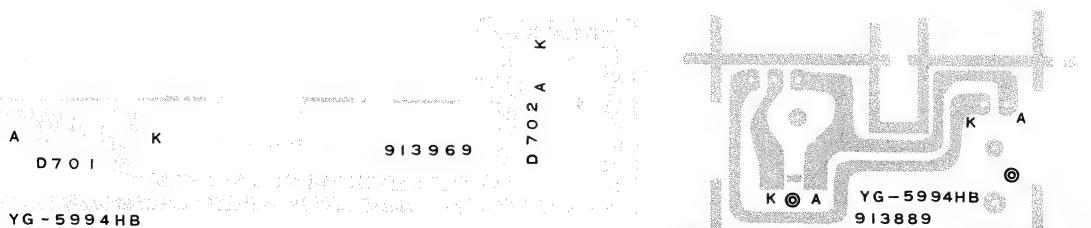


POWER SUPPLY P.W.B. (1)

POSITION SENSOR
P.W.B.

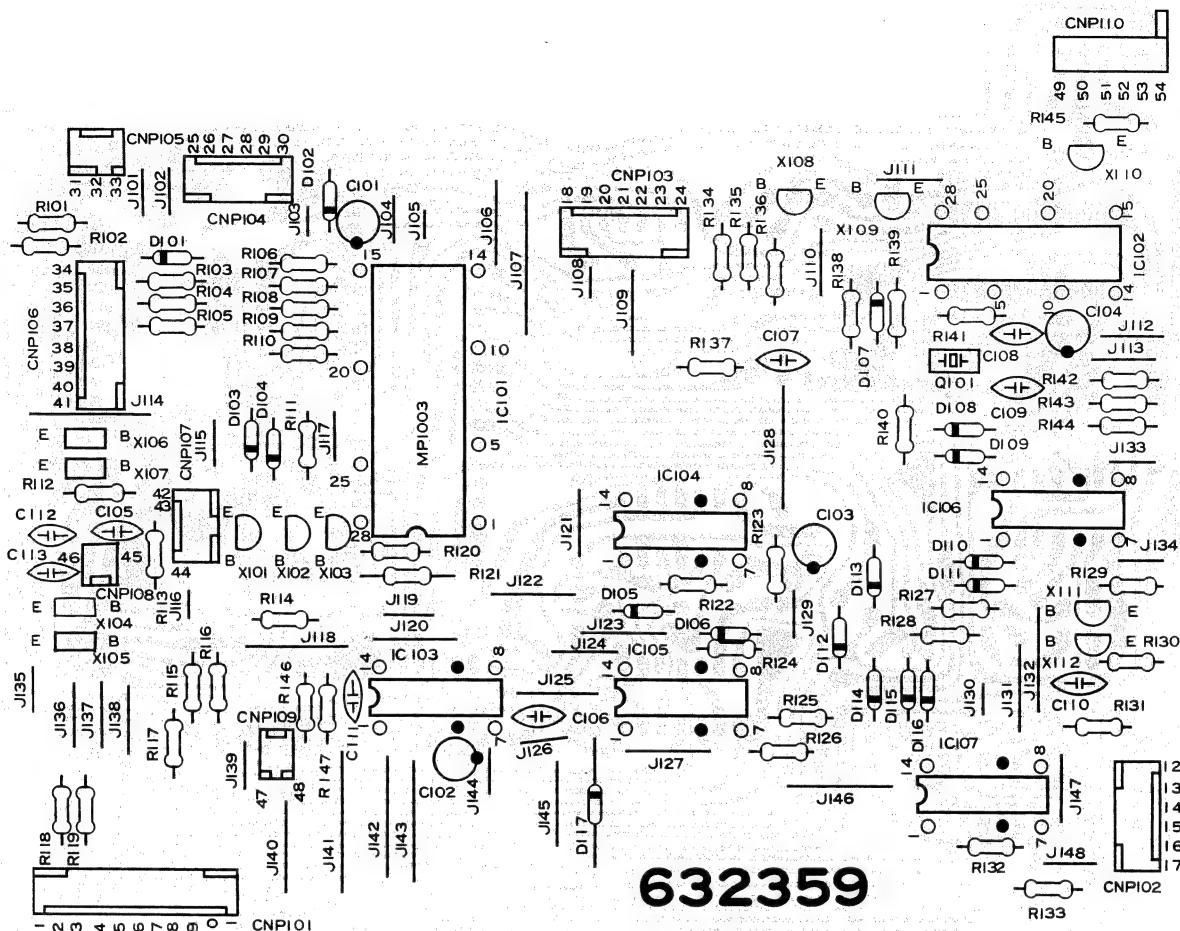


POWER SUPPLY P.W.B. (2)

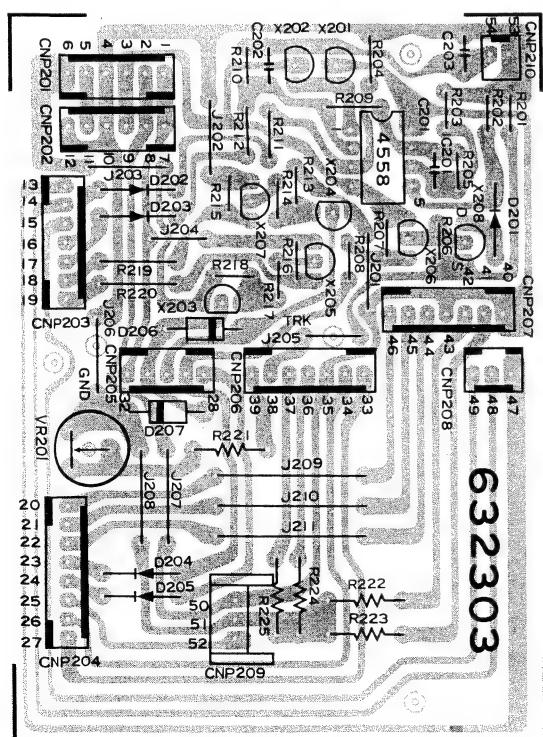


RECORD SIZE POSITION
SENSOR P.W.B.

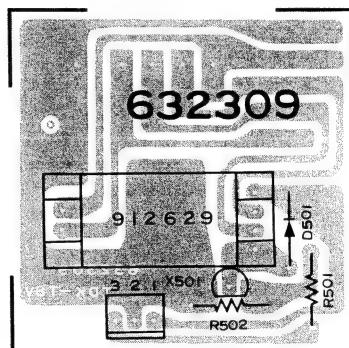
LED P.W.B. FOR LP SENSOR
AND POSITION SENSOR



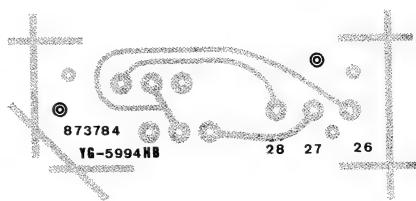
MAIN CONTROL P.W.B. (1)



MAIN CONTROL P.W.B. (2)



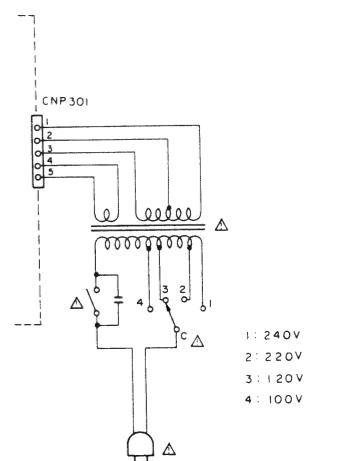
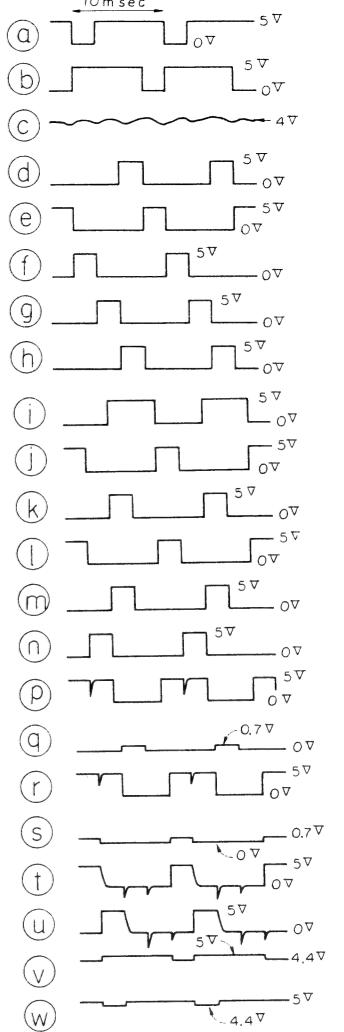
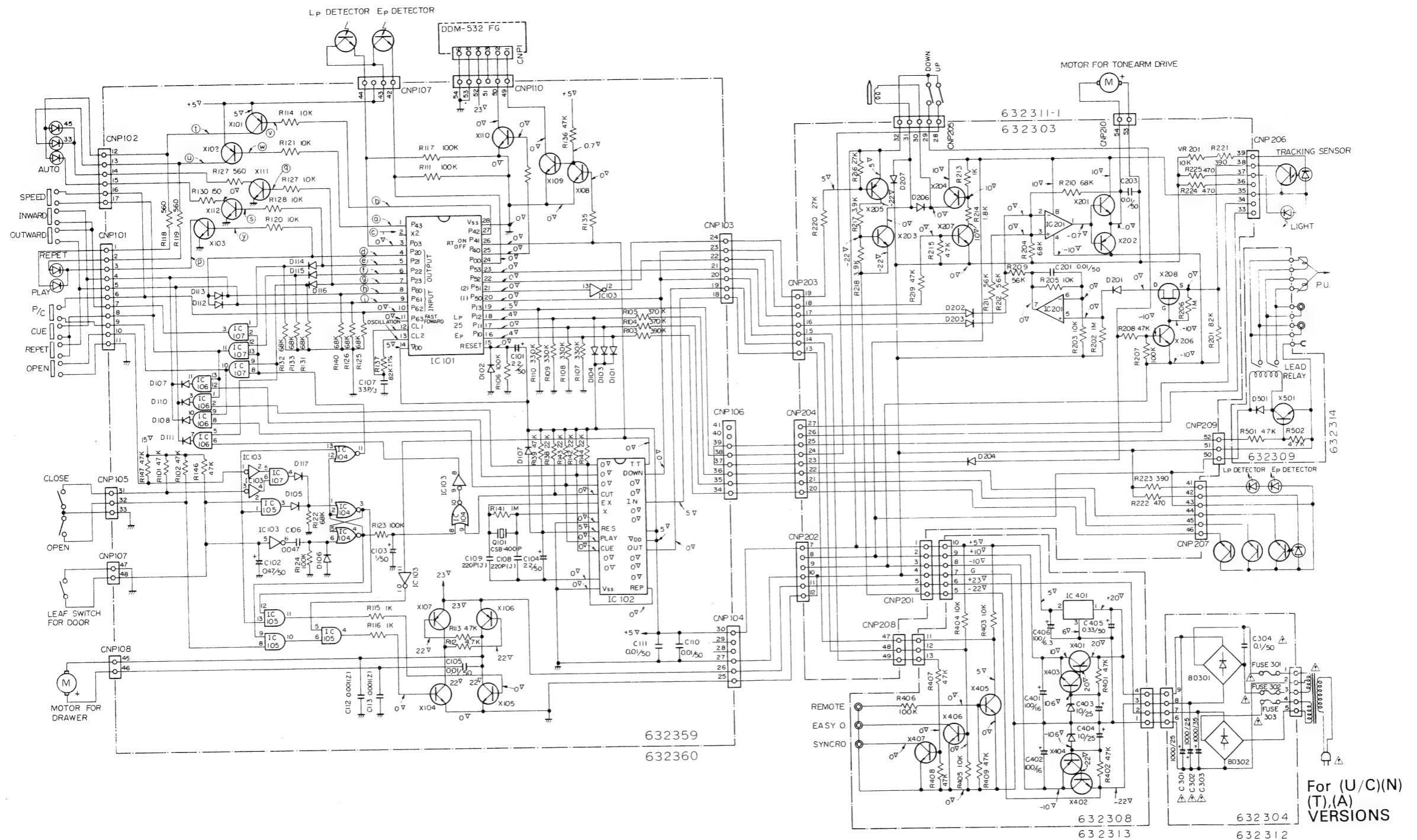
MUTING P.W.B.



DRAWER SWITCH P.W.B.

MODEL TT333

6. SCHEMATIC DIAGRAM



FOR E VERSION

IC104 (μPD4001BC) (TC4001BC)	5V	14	5V	1	13	5	2	12	5	3	11	0	4	10	5	5	9	0	6	8	4	7
------------------------------------	----	----	----	---	----	---	---	----	---	---	----	---	---	----	---	---	---	---	---	---	---	---

IC103 (μPD4069UBC) (TC4069UBC)	5V	14	5V	1	13	0	2	12	5	3	12	0	4	11	0	5	10	5	6	9	0	7
--------------------------------------	----	----	----	---	----	---	---	----	---	---	----	---	---	----	---	---	----	---	---	---	---	---

IC105 (μPD4081BC) (TC4081BC)	5V	14	5V	1	13	5	2	12	0	3	12	0	4	11	0	5	10	5	6	9	0	7
------------------------------------	----	----	----	---	----	---	---	----	---	---	----	---	---	----	---	---	----	---	---	---	---	---

IC106 (μPD4081BC) (TC4081BC)	5V	14	5V	1	13	5	2	12	0	3	12	0	4	11	0	5	10	5	6	9	0	7
------------------------------------	----	----	----	---	----	---	---	----	---	---	----	---	---	----	---	---	----	---	---	---	---	---

IC107 (μPD4081BC) (TC4081BC)	5V	14	5V	1	13	5	2	12	0	3	12	0	4	11	0	5	10	5	6	9	0	7
------------------------------------	----	----	----	---	----	---	---	----	---	---	----	---	---	----	---	---	----	---	---	---	---	---

Note on safety:

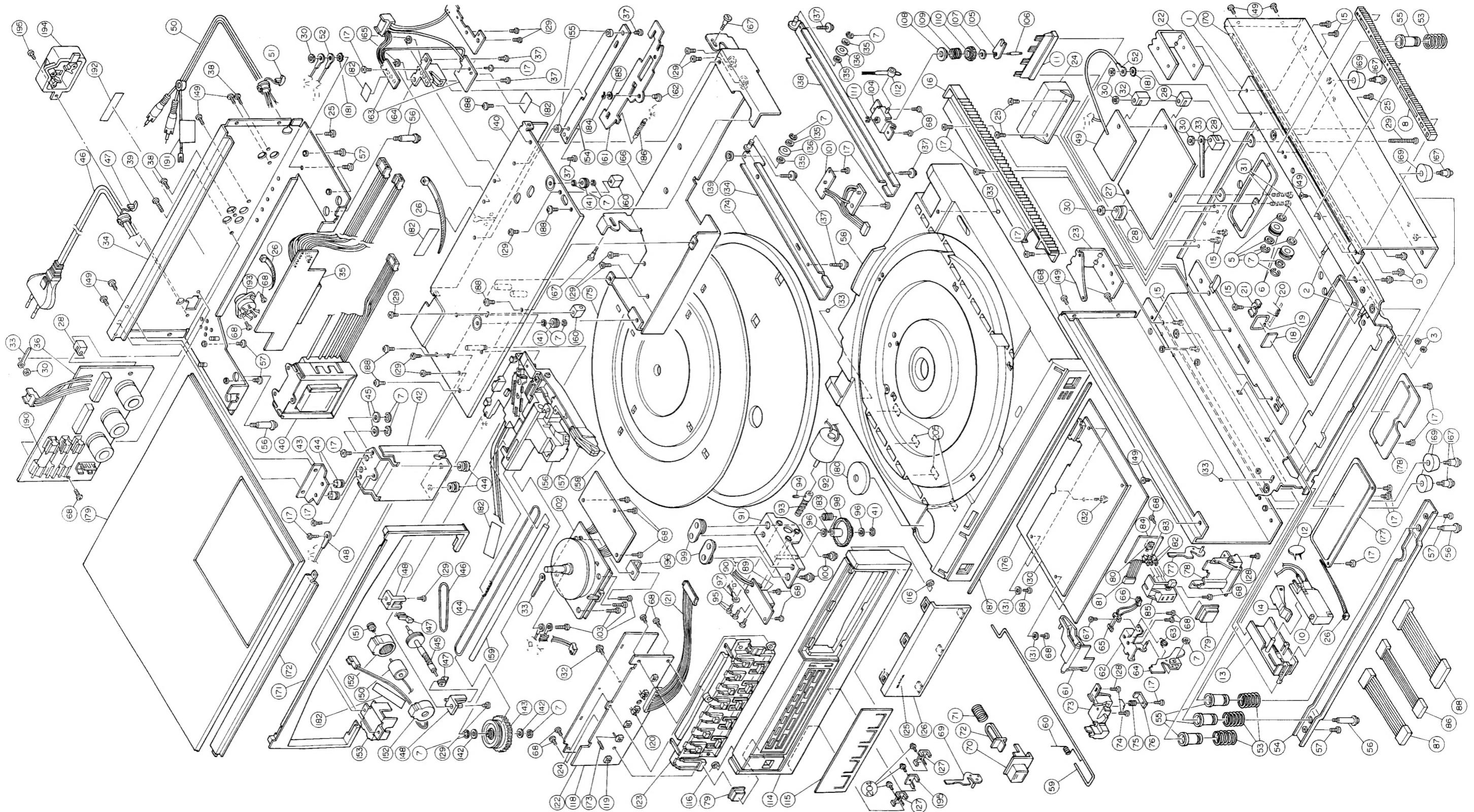
Symbol fire or electrical shock hazard.

Only original parts should be used to replace any parts marked with symbol .

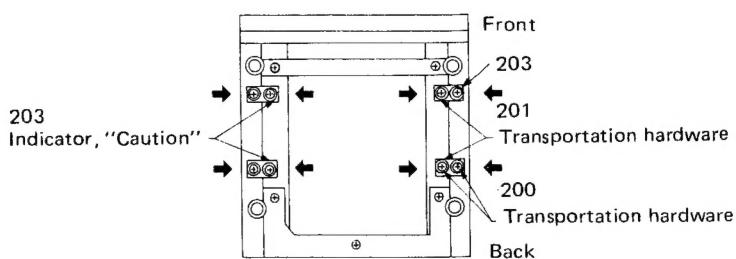
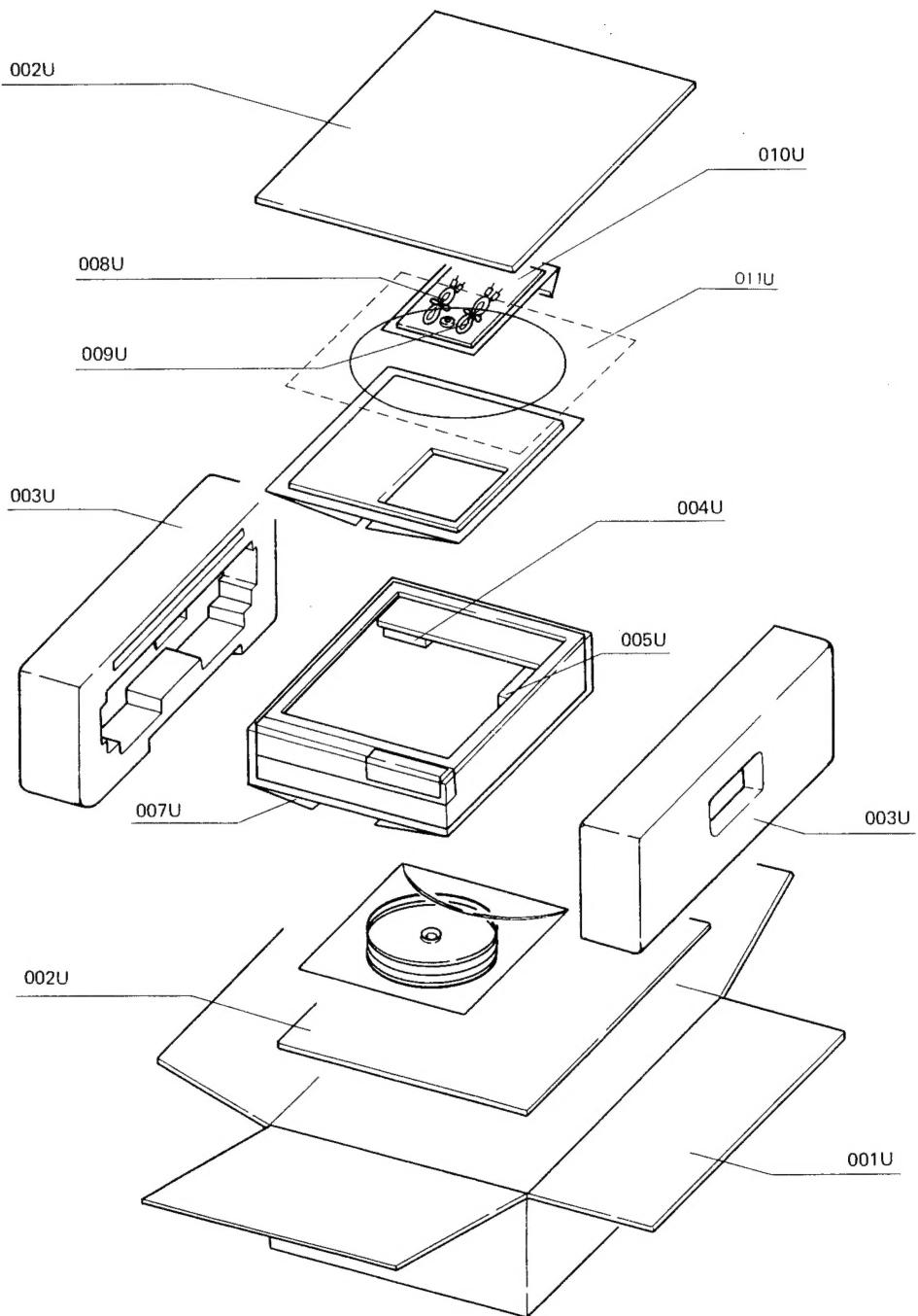
Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

Components and wiring are subject to change for modification without notice.

[P01-99] EXPLODED VIEW



8. [H01-99] PACKING MATERIALS



(E) : for Europe
 (N) : for Europe
 (T) : for England
 (A) : Australia
 (U/C) : for U.S.A./Canada

9. PARTS LIST

REF. DESIG.	Q'TY					PART NO.	DESCRIPTION	REF. DESIG.	Q'TY					PART NO.	DESCRIPTION	
	U	C	N	E	A	T		U	C	N	E	A	T			
6	2	2	2	2	2	2	424Z358010	Roller	D201	?	4	4	4	4	HD20020050	Diode, 1S1588
34	1						423Z160020	Bracket, Rear Panel	D204							
34	1						423Z160030	Bracket, Rear Panel	D206	1	1	1	1	1	HD20008060	Diode, F14C
34	1						423Z160040	Bracket, Rear Panel	D207	1	1	1	1	1	HD20008060	Diode, F14C
34					1	1	423Z160060	Bracket, Rear Panel	VR201	1	1	1	1	1	RA01030070	10kΩ, Trimming
47	1						424Z259010	Bush, Power Cord	35	1	1	1	1	1	ZZ424Z0020	P.W.B. Ass'y, Power Supply (2)
47		1	1	1	1	1	424Z259030	Bush, Power Cord	P400	1	1	1	1	1	YF424Z0020	P.W.B. Ass'y, (2) Power Supply (2)
51	1	1	1	1	1	1	424Z259020	Bush, Power Cord	IC401	1	1	1	1	1	HC10031060	IC, μPC78L05
58	1	1	1	1	1	1	423Z064010	Case, Cabinet	X401	1	1	1	1	1	HT205362AR	2SB536-L, K
70	1	1	1	1	1	1	424Z154050	Knob, Power	X402	1	1	1	1	1	HT403812AR	2SD381-L, K
79	2	2	2	2	2	2	424Z154060	Knob, Open Speed	X403	1	1	1	1	1	HT309452B0	2SC945-P, Q
93	1	1	1	1	1	1	424Z058010	Gear, Worm	X404	1	1	1	1	1	HT107332A0	2SA733-P, Q
98	1	1	1	1	1	1	424Z058020	Gear	X405	1	1	1	1	1	HT309452B0	2SC945-P, Q
112	1	1	1	1	1	1	424Z071010	Cleaner	X406	1	1	1	1	1	HT309452B0	2SC945-P, Q
114	1	1	1	1	1	1	423Z063020	Escutcheon, Front Panel	X407	1	1	1	1	1	HT309452B0	2SC945-P, Q
115	1	1	1	1	1	1	423Z265010	Indicator, SW plate	ZD401	1	1	1	1	1	HD300005AR	Zener, RD11E (B2)
116	2	2	2	2	2	2	424Z056010	Buffer	ZD402	1	1	1	1	1	HD300005AR	Zener, RD11E (B2)
125	1	1	1	1	1	1	424Z251010	Badge, marantz	36	1					ZZ424Z1030	P.W.B. Ass'y, Power Supply (1)
126	1	1	1	1	1	1	423Z158010	Window	36	1		1	1	1	ZZ424Z2030	P.W.B. Ass'y, Power Supply (1)
133	3	3	3	3	3	3	424Z106010	Sustainer; Steel Ball	36		1				ZZ424Z3030	P.W.B. Ass'y, Power Supply (1)
144	1	1	1	1	1	1	424Z006500	String Ass'y, Wire Rope	P300	1	1	1	1	1	YF424Z0030	P.W. Board, Power Supply (1)
146	1	1	1	1	1	1	424Z264010	Belt, Tonearm Drive	D301	1	1	1	1	1	HD20026080	Diode, RB-151
151	1	1	1	1	1	1	424Z262010	Pulley, Motor	D302	1	1	1	1	1	HD20026080	Diode, RB-151
157	1	1	1	1	1	1	PC221004AR	Phono Cartridge	C301	1	1	1	1	1	EA1080251R	Elect, 1,000μF 25V
158	1	1	1	1	1	1	PS221004AR	Stylus, CTS-433	C302	1	1	1	1	1	EA1080251R	Elect, 1,000μF 25V
168	1	1	1	1	1	1	424Z053040	Cover, Left	C303	1	1	1	1	1	EA1080351R	Elect, 1,000μF 35V
170	1	1	1	1	1	1	424Z053050	Cover, Right	D301	1	1	1	1	1	FS10100500	Fuse, 1A 250V
171	1	1	1	1	1	1	424Z401020	Frame, Front	D302	1	1	1	1	1	FS10100500	Fuse, 1A 250V
174	1	1	1	1	1	1	424Z165010	Turntable	D303	1	1	1	1	1	FS10100500	Fuse, 1A 250V
175	1	1	1	1	1	1	423Z107010	Sheet	FUSE301	1					FS10080800	Fuse, T800 mA 250V
179	1	1	1	1	1	1	424Z053060	Cover, Dust Cover	FUSE302	1					FS10080800	Fuse, T800 mA 250V
180	1	1	1	1	1	1	424Z362010	Rec. Adaptor	FUSE303	1					FS10080800	Fuse, T800 mA 250V
187	1	1	1	1	1	1	424Z007010	Strip	FUSE301	1	1	1	1	1	TS100010AR	Power Transf.
200	8	8	8	8	8	8	424Z010010	Screw	FUSE302	1	1	1	1	1	TS100011AR	Power Transf.
201	4	4	4	4	4	4	424Z114010	Stopper	FUSE303	1	1	1	1	1	TS100012AR	Power Transf.
203	8	8	8	8	8	8	424Z265020	Indicator, Caution	40	1				TS100013AR	Power Transf.	
B	1						423Z801510	Packing Case Ass'y	46	1				YC018002AR	Power Cord	
C	1	1	1	1	1	1	423Z801520	Packing Case Ass'y	46	1	1	1	1	YC020002AR	Power Cord	
003U	2	2	2	2	2	2	424Z809010	Cushion	46		1			YC020003AR	Power Cord	
004U	1	1	1	1	1	1	424Z252010	Pad	46			1		YC020004AR	Power Cord	
005U	1	1	1	1	1	1	424Z252020	Pad	D501	1	1	1	1	1	HT309452B0	2SC945-P, Q
191	1	1	1	1	1	1	424Z861020	Label, Earth Caution	L501	1	1	1	1	1	LY212001AR	Diode, 1S1588
007U	1	1	1	1	1	1	421Z269030	Protector	50	1	1	1	1	1	YB015003AR	Relay, 12V
008U	1	1	1	1	1	1	ZD01000220	Connective Cord, Green	50	1	1	1	1	1	YB015004AR	Connective Cord, Output
009U	1	1	1	1	1	1	ZD010001AR	Connective Cord, Black	65	1	1	1	1	1	SM010110AR	Connective Cord, Output
010U	1	1	1	1	1	1	423Z851310	Instructions								
011U	1	1	1	1	1	1	423Z107020	Sheet, Sensor								
10	1	1	1	1	1	1	SM010203AR	Mini Switch, Power								
12	1	1	1	1	1	1	DK18103840	Ceramic 0.01μF 400V								
27	1	1	1	1	1	1	ZZ423Z0010	P.W.B. Ass'y, Control (2)								
P200	1	1	1	1	1	1	YF424Z0010	P.W. Board, Control (2)								
IC201	1	1	1	1	1	1	HC10003090	IC, NJM4558D								
X201	1	1	1	1	1	1	HT406673A0	2SD667A-B.C.D.	X501	1	1	1	1	1	HT309452B0	2SC945-P, Q
X202	1	1	1	1	1	1	HT206473A0	2SB647A-B.C.D.								
X203	1	1	1	1	1	1	HT320011K0	2SC2001-K								
X204	1	1	1	1	1	1	HT109521K0	2SA952-K								
X205	1	1	1	1	1	1	HT107332A0	2SA733-P, Q								
X206	1	1	1	1	1	1	HT309452B0	2SC045-P, Q								
X207	1	1	1	1	1	1	HT309452B0	2SC945-P, Q								
X208	1	1	1	1	1	1	HT200682A0	2SK68-K, L								

(E) : for Europe
 (N) : for Europe
 (T) : for England
 (A) : for Australia
 (U/C) : for U.S.A./Canada

REF. DESIG.	Q'TY					PART NO.	DESCRIPTION
	U/C	N	E	A	T		
P600	1	1	1	1	1	ZZ423Z0050	P.W.B. Ass'y, Speed SW.
	1	1	1	1	1	YF423Z0050	P.W. Board, Speed SW.
82	2	2	2	2	2	HI10004080	L.E.D. SEL1124R
83	1	1	1	1	1	HI10005080	L.E.D. SEL1324G
SW207	1	1	1	1	1	SP010101AR	Push Switch
90	1	1	1	1	1	ZZ424Z0070	P.W.B. Ass'y, Drawer SW.
89	2	2	2	2	2	SM010204AR	Mini Switch
92	1	1	1	1	1	MM016002AR	D.C Motor, Drawer
101	1	1	1	1	1	ZZ423Z0080	P.W.B. Ass'y, Disc Sensor
102	1	1	1	1	1	PM233007AR	Phono Motor
122	1	1	1	1	1	ZZ423Z0090	P.W.B. Ass'y, Touch Control
P700	1	1	1	1	1	YF423Z0090	P.W. Board, Touch Control
SW601	6	6	6	6	6	SP010101AR	Push Switch
SW606							
120	2	2	2	2	2	HI10001080	LED, SEL1112R
130	1	1	1	1	1	ZZ423Z0100	P.W.B. Ass'y, Control (1)
P100	1	1	1	1	1	YF423Z0100	P.W. Board, Control (1)
IC101	1	1	1	1	1	HC100016AR	IC, MP1003
IC102	1	1	1	1	1	HC10102030	IC, LM6416E
IC103	1	1	1	1	1	HC406905B0	IC, TC4069UBP
IC104	1	1	1	1	1	HC400100B0	IC, LC4001B
IC105	1	1	1	1	1	HC408100B0	IC, MC14081B
IC106	1	1	1	1	1	HC408100B0	IC, MC14081B
IC107	1	1	1	1	1	HC408100B0	IC, MC14081B
X101	1	1	1	1	1	HT107332A0	2SA733-P, Q
X102	1	1	1	1	1	HT107332A0	2SA733-P, Q
X103	1	1	1	1	1	HT309452B0	2SC945-P, Q
X104	1	1	1	1	1	HT405712B0	2SD571-L, K
X105	1	1	1	1	1	HT405712B0	2SC571-L, K
X106	1	1	1	1	1	HT206052B0	2SB605-L, K
X107	1	1	1	1	1	HT206052B0	2SB605-L, K
X108	5	5	5	5	5	HT309452B0	2SC945-P, Q
X112							
D101	17	17	17	17	17	HD20020050	Diode, 1S1588
D117							
Q101	1	1	1	1	1	FQ04003010	Ceramic Vi, 400 kHz
R137	1	1	1	1	1	GM1148202R	82 kΩ, ¼W, ±1%
150	1	1	1	1	1	MM005001AR	DC Motor, Tonearm Drive
163	1	1	1	1	1	ZZ423Z0110	P.W.B. Ass'y PR Sensor
193		1				BY050504AR	Voltage Selector

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY:

Symbol Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.